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# "SULLITE"

## PORTABLE ELECTRIC PLANTS

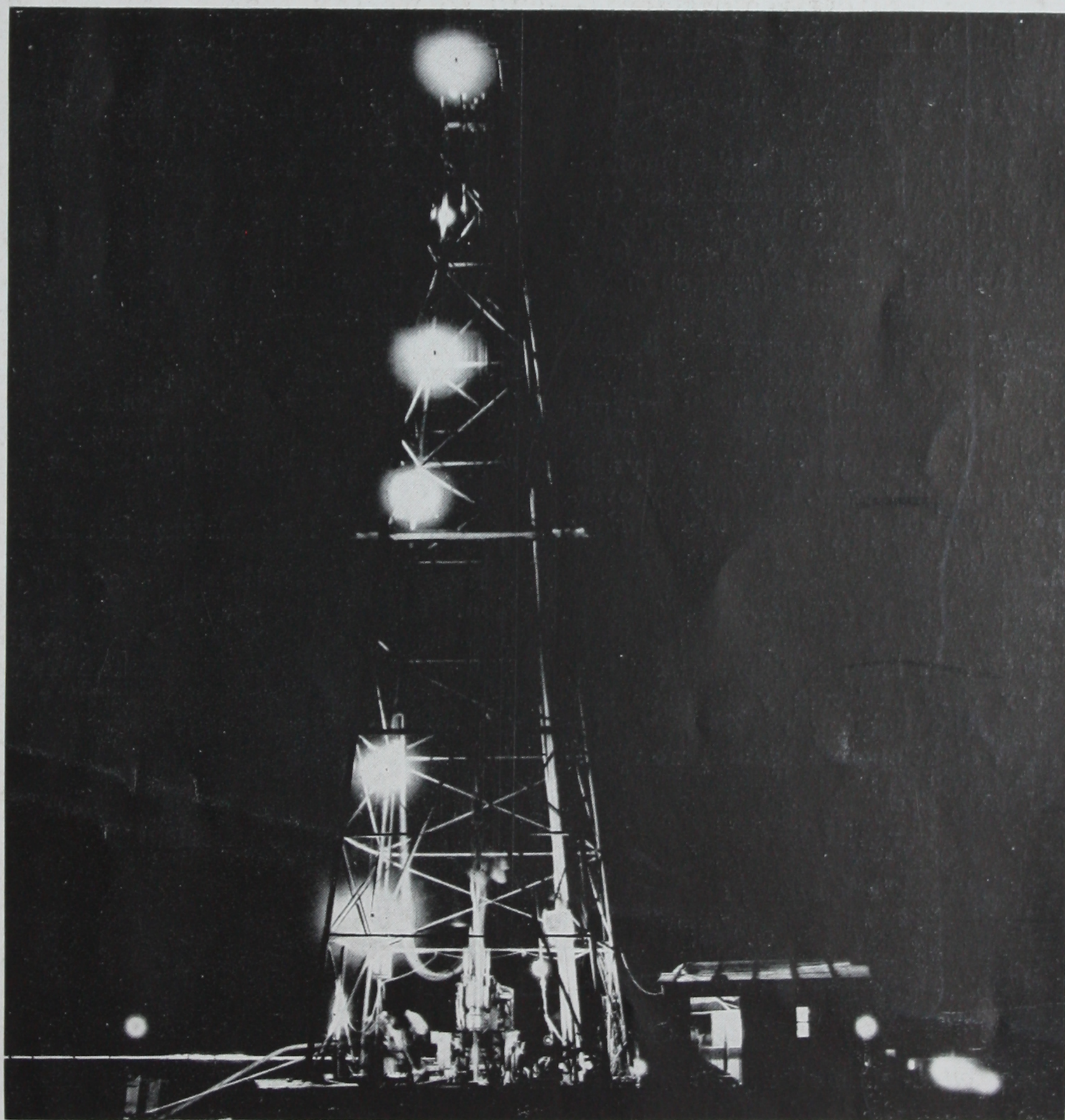
SULLIVAN ACCESSORIES



BULLETIN No. 100-B



OCTOBER, 1930



# SULLIVAN MACHINERY COMPANY

CHICAGO  
400 North Michigan Avenue

NEW YORK  
30 Church Street

LONDON  
Salisbury House, E. C.-2

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# LIKE THE MAGIC OF ALADDIN ON YOUR JOB

You know the story of Aladdin—how it was only necessary for him to rub his magic lamp and a genie instantly appeared to serve his every wish—

“Sullite” Electric Plants are not unlike this—nothing magic or supernatural of course—but as instantly responsive to serve you, to meet your lighting requirements—and so we say that a “Sullite” on your job is like having the magic of Aladdin’s lamp to serve you.

## “Sullite” Always Ready To Go

Whether a quick portable source of night illumination must be had, or a lighting arrangement for consistent night after night operation to help keep up the working schedule, “Sullite” Electric Plants (self-contained) are ideal for the job—and *always on the job ready to go.*

In no other lines of work must emergencies be met so promptly and effectively as in oil drilling and in the construction field. Adverse weather conditions, unexpected delays from innumerable causes may make the job lag behind. These delays cannot always be made up by enlarging the day crew, but only by overtime work or a regular night shift—and *that is where “Sullite” Electric Plants “pay off.”*

## Portable and Self Contained

“Sullite” Electric Plants are portable and entirely self contained. They were particularly designed and constructed to meet the lighting requirements for drilling rigs and other night operations, and are there-

fore, highly satisfactory outfits for the severe requirements of all lines of night construction work, construction camps, or small permanent installations.

## Positive Illumination

When illumination is required on your job it must be available at once—without delay or fuss, from a source that can be operated by any one of the crew. It must be steady, flickerless, unfailing, and defy wind and storm. That is the kind of illumination you will get from “Sullite” Electric Plants because they are built to supply just that kind of lighting service.

## Safe Illumination

Everyone knows the advantages of electric illumination. It is flexible, easily installed, and free from fire hazards. No open flames to sputter, to be blown out, or worse, to come in contact with inflammable material. When you must have light you want positive light—and absolutely safe light—and *that is “Sullite” Electric Plant Illumination.*

## Advantages of “Sullite” Electric Plants

Clean, safe and steady illumination

Standard 110 volts

Completely self-contained

Will operate electric appliances and tools

Easy to connect and operate—No expert knowledge required

Specially built for severe service and to withstand vibration when installed on power equipment

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ALL THE MAGIC OF ALADDIN’S LAMP COULD NOT  
HAVE SERVED YOUR LIGHTING REQUIREMENTS BETTER  
THAN “SULLITE”

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◀ ◀ ◀ ◀ ◀ "SULLITE" ELECTRIC LIGHTING PLANTS ▶ ▶ ▶ ▶ ▶

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## "Sullite" Models "SW," 350 Watts; "SY," 750 Watts; "SYY," 900 Watts; "SR," 1500 Watts—Direct Current

Sullivan "Sullite" Electric Plants, Models "SW," "SY," "SYY," and "SR," air cooled, are identical in construction details and general appearance; the only difference being in the size of the generator and engine.

The accompanying picture shows the appearance and construction features, and the following specifications and features cover all the models and sizes mentioned.

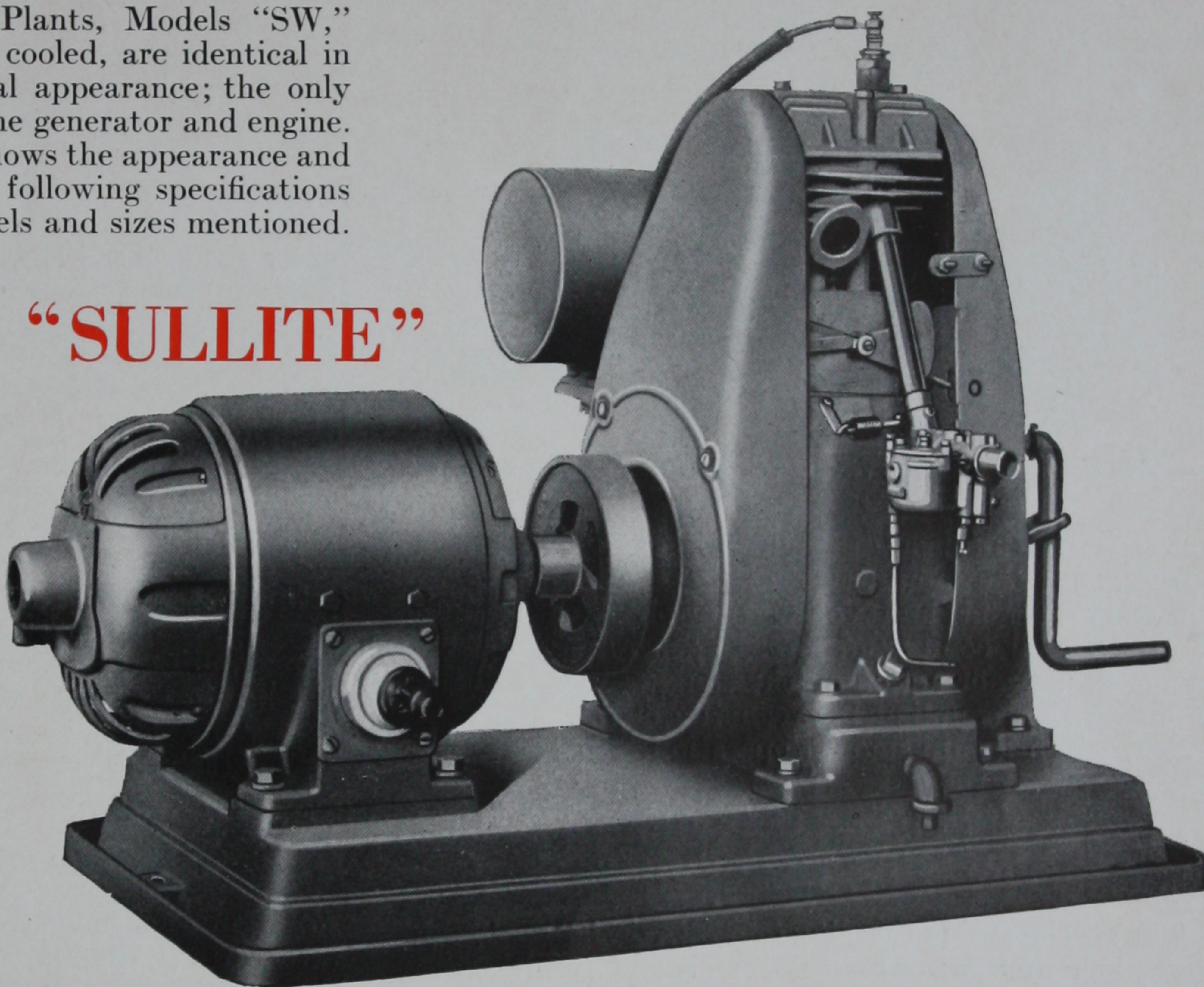
### Engine

The engine is of the single cylinder, 4-cycle air cooled type, especially designed for this duty and accurately built for sustained operation with simple attention. On all sizes, the engine is of adequate horse power to deliver the full rated capacity continuously, and even a reasonable overload when required, yet is remarkably economical in operation.

The magneto is of the high tension type and built in to the flywheel. It supplies a fat, hot spark that makes starting easy.

Double cooling blowers are provided, so that the engine is kept cool while pulling the full rated capacity load in the hottest climate.

### "SULLITE"



Model "SY" "Sullite" Electric Plant, 110 V., 750 W.

### Generator

The generators are especially built for the severe service for which these plants are so frequently used. They are of the compound wound type, and especially insulated to withstand a great deal of moisture and heat. The commutator design is the result of careful study to assure a smooth, flickerless, flow of current at all times.

### Completely Self Contained

"Sullite" Plants are completely self contained and ready for operation when received. Everything necessary for satisfactory operation is included. It is only necessary to put in the fuel and oil to start the plant in operation.

They are of the most rugged and sturdy construction throughout, but their extremely compact design makes them comparatively light in weight for their capacity—features that make "Sullite" plants very desirable for all portable uses.

### Standard Current

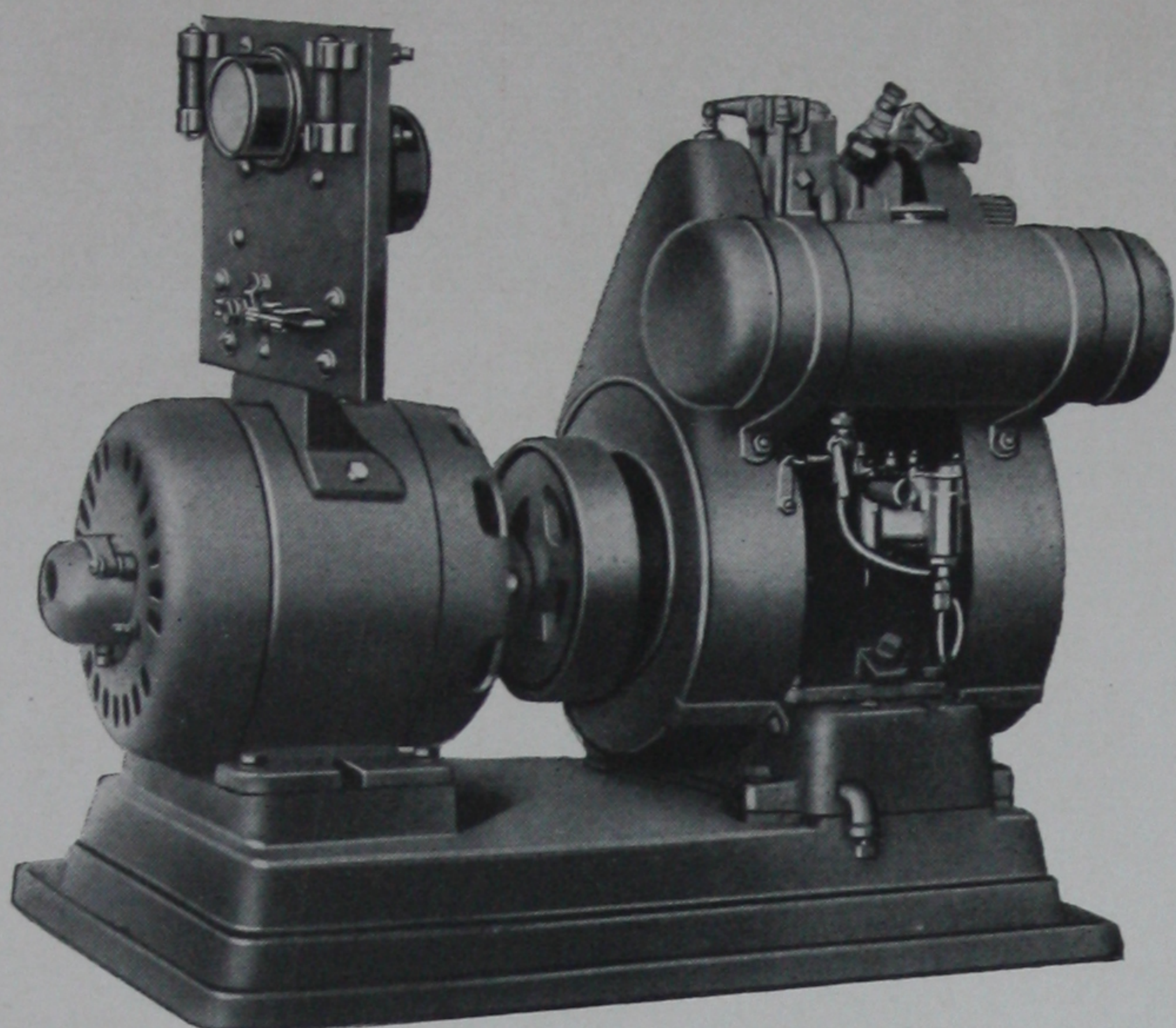
"Sullite" Electric Plants generate standard 110 volts, direct current (32 volts D. C. may also be had in the Models "SW," 350 watts, and "SY," 750 watts). Direct Current is preferable for portable lighting requirements. Motors may also be operated up to the capacity of the plants, either standard D. C. or universal wound type (see table on page 5).

The current is supplied direct from the generator. *No storage battery of any kind is required.*

### Steady Current and Voltage

Second only to their sturdy dependability, the most desirable feature of "Sullite" Electric Plants is the extremely steady current output, providing flickerless lights and constant voltage under all load conditions. This feature gives you the same steady voltage and current as any city power supply. There is no danger of burning out lamps with the "Sullite," even when most of the load is suddenly turned off or on. "Sullite" plants handle any load, from a single lamp of the smallest





"Sullite" Model "W," 12 V., 400 W., Battery Charging Plant

size to the full load, without flicker or danger of burning out the lamps.

Steady current and voltage are obtained because of the special compound wound generators, the responsive governor action on the engine speed, and the special spring coupling between the engine and generator, which assure smooth operation.

### Special Spring Coupling and Power Take-Off Pulley

The special spring coupling (our own design) between the engine and generator assures absolutely flickerless light. The unique torsion spring arrangement takes up all the explosion impulses between the engine and generator. This special spring coupling is obtainable only on "Sullite" built plants.

The coupling may also be used for belt power take-off drive, up to the horsepower of the engine.

### Plug-In Socket

A convenient plug-in socket is located on the side of the generator. This arrangement makes it very convenient to connect the lighting or load line, and adds greatly to the portability of these plants.

The model "SR," 1500 watts, has two such plug-in sockets, so two separate lines can be conveniently strung. All other air cooled models have one such plug-in socket, except the 12-volt Model "W" plants, where connection is made to a switchboard on the generator.

### Hand or Foot Starter

All "Sullite" air cooled Electric Plants are provided with a convenient hand or foot lever starter. This arrangement assures starting the engine quickly and conveniently with absolutely no danger of kick back.

## Model "W," 400 Watts, 12 Volts, For Storage Battery Charging

A small self-contained portable electric plant for charging electric starter batteries is a necessity where there are several motor trucks and cars operating away from regular garage facilities. Especially in the oil fields, where there is so much night driving, the excessive use of headlights runs the battery down faster than the car's generator can recharge it.

The "Sullite" Model "W," 400-watt, 12-volt, Electric Plant is designed for recharging the 6 and 12-volt storage batteries used with the electric starters on the larger gasoline engines. Many outfits have one or more of these plants on hand to quickly and conveniently recharge the starter batteries. The delays and the danger of hand cranking the larger gasoline engines are thus avoided and ample light for night driving is assured.

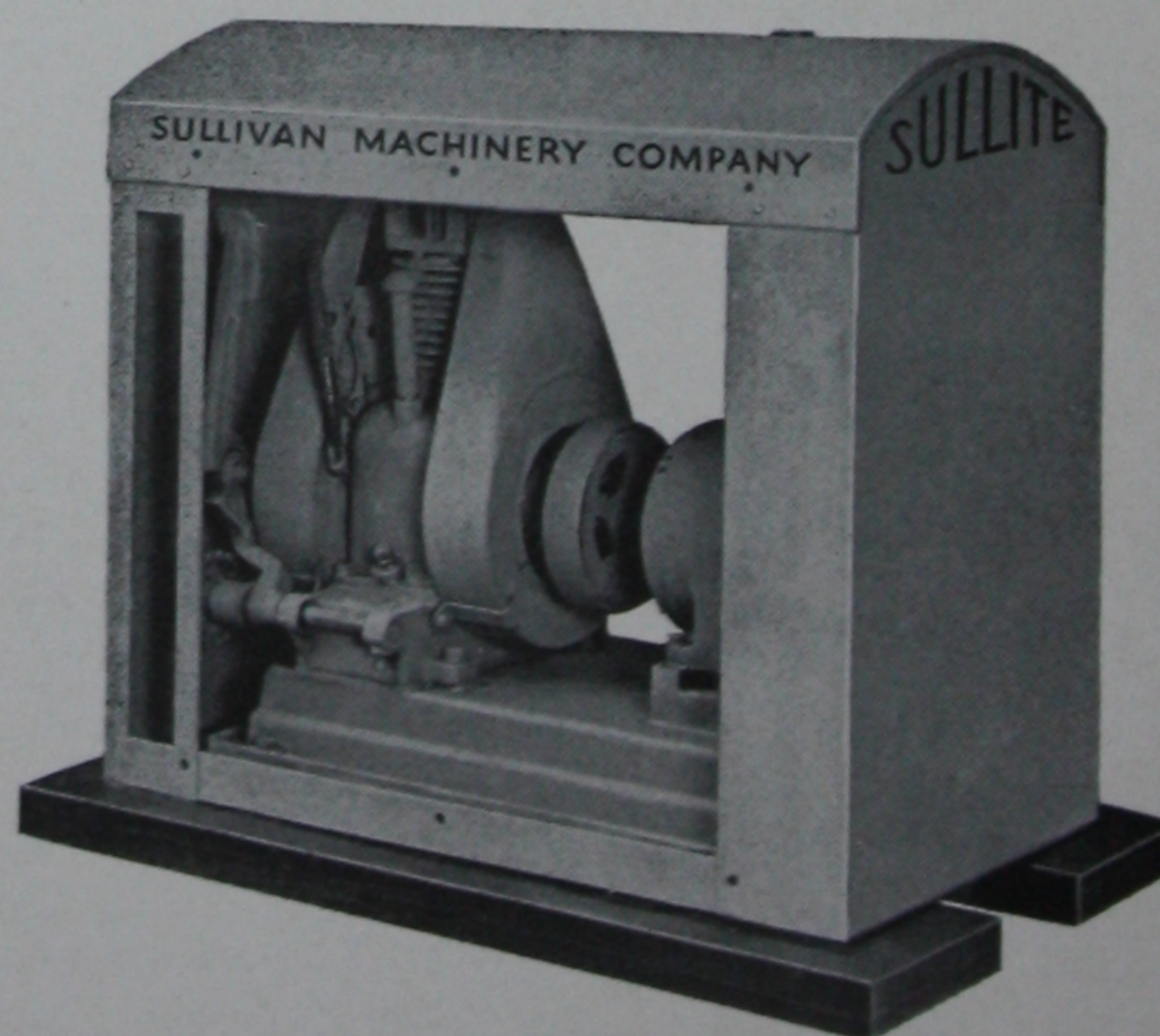
Model "W" is identical with the Model "SW," 350-watt plant, except a generator of 400 watts (12-volts) is used, and the necessary switchboard for battery charging is provided.

This 12-volt Model "W," 400-watt plant can charge either one and up to twelve 6-volt batteries at one time, or one and up to six, 12-volt batteries at one time. It may be started from either two 6-volt or one 12-volt battery by merely pressing in the starting switch provided for this purpose. The convenient hand or foot lever starter is also provided as on the 110-volt plants.

### Sheet Metal Housing

Any of the models, "SW," 350 watts; "W," 400 watts, "SY," 750 watts, "SYY," 900 watts, or "SR," 1500 watts can be supplied with a sheet metal housing as shown below.

This housing (less the side covers) is usually sufficient to protect the plant from the weather. A canvas cover for the sides may be used when necessary. Removable metal side covers, completely enclosing the plant can be supplied on special order.



"Sullite" air cooled plant illustrating the Sheet Metal Housing



# ◀ ◀ ◀ ◀ ◀ "SULLITE" ELECTRIC LIGHTING PLANTS ▶ ▶ ▶ ▶ ▶

## Details of "Sullite" Electric Plants

MODEL	SW	W	SY	SY Y	SR	SAK	SBK
Capacity in Watts	350	400	750	900	1500	1500	2500
Standard Voltage*	110, 32	12	110, 32	110	110	110	110
Number of 25 watt lamps (or equivalent) plant will carry at one time	14	.....	30	36	60	60-75	100
Total Electric Motor Load plant will carry at one time**	1/4 H.P.	.....	3/4 H.P.	9/10 H.P.	1 1/2 H.P.	1 3/4 H.P.	2 1/2 H.P.
Horsepower of Engine at normal speed	3/4	3/4	1 3/4	2	3	4	5
Cooling System of Engine	Air Cooled	Air Cooled	Air Cooled	Air Cooled	Air Cooled	Water Cooled	Water Cooled
Approximate number of hours plant will operate at rated load on 1 gallon of gasoline	10	9	5 1/4	4 1/2	3	3	1 3/4

### Weights and Dimensions

Overall Length of Plant, Inches	26	26	36	36	38	44	44
Overall Width of Plant, Inches	14	14	16	16	16	18	18
Overall Height of Plant, Inches	19 1/2	21	24	24	24	32	32
Approximate Net Weight of Plants, Lbs.†	135	139	225	230	280	625	690
Approximate Domestic Shipping Weight, Lbs.††	155	160	275	280	330	700	765
Approximate Export Gross Shipping Weight, Lbs.††	210	215	325	330	400	800	865
Cubic Dimensions, less house, Cu. Ft.	8	8	16	16	10	Housing Standard	Housing Standard
Cubic Dimensions, with house, Cu. Ft.	10 1/2	10 1/2	19	19	22	29	29

### Code Words and Prices

Code Word#	Aegex‡	Aegiw‡	Aegob	Aegut	Aigar	Aigen	Aigip
Domestic Prices, F.O.B. Factory							
Extra for Sheet Metal Housing (less side covers)							
Extra for Metal Side Covers (2)							
Export Prices							

### Natural Gas Operation

Approximate capacity of plant in watts when operating on Natural Gas	320	320	720	800	1225	1500	2000
Additional Price for Gas Carburetor							

\*110 volts is standard on all models, except Model "W" in which 12 volts is standard. Models "SW" and "SY" may be had for 32-volt operation when specified.

\*\*Direct Current or Universal type motors.

†Weight of sheet metal housing not included on air cooled plants. For housing add weights as follows: Model "SW," 35 lbs.; Model "W," 35 lbs.; Model "SY," 50 lbs.; Model "SY Y," 50 lbs.; Model "SR," 90 lbs. Housing is standard on Models "SAK" and "SBK" and is included in the weights stated.

††Gross weight less sheet metal housing (except Models "SAK" and "SBK" which are standard with housing). For housings add the following gross weights: Model "SW," 50 lbs.; "W," 50 lbs.; "SY," 75 lbs.;

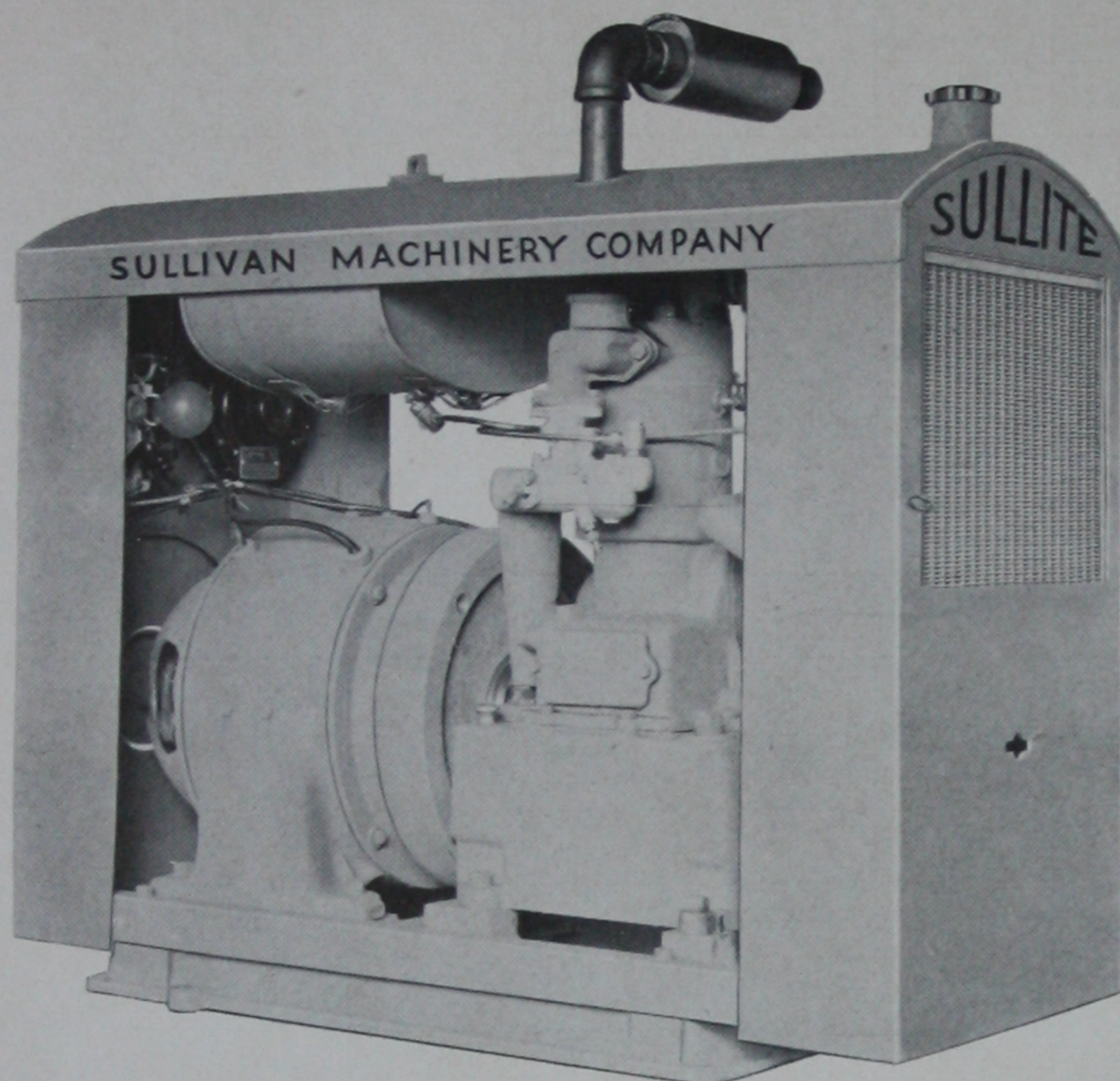
"SY Y," 75 lbs.; "SR," 90 lbs., to this figure.

#Code word for standard outfit, complete (less fuel and oil) and ready to run, as described above and in accompanying pages. Specify extra equipment in addition to code word as: (code word) with (equipment). If air cooled type plant with sheet metal housing but without side covers is wanted give the Code Word of the plant and also the Code Word "Aigom". If plant with housing and side covers is desired, give code word of plant and the Code Word "Aigul". For Natural Gas Carburetor give word "Aogij", in addition to code word.

‡For Model "SW," 32 volts or Model "SY," 32 volts, the Code Word is "Aogig", in addition to code word in table.



## "Sullite" Models "SAK," $1\frac{1}{2}$ K.W. and "SBK," $2\frac{1}{2}$ K.W. Water Cooled—110 Volts—Direct Current



Front view of Model "SAK" or "SBK" Plant, with Radiator and Housing. Note the switch block and rheostat in rear

Models "SAK" and "SBK" were developed and are supplied for the oil fields, and for all other construction and industrial work, where portable electric plants for extremely heavy duty are required.

The Model "SAK"  $1\frac{1}{2}$  K.W. (1500 Watts) and "SBK"  $2\frac{1}{2}$  K.W. (2500 Watts) are identical in every respect, with exception of generator capacity.

The  $1\frac{1}{2}$  K.W. unit will light twenty-two 75-watt lamps (or equivalent) or will operate up to  $1\frac{1}{2}$  H.P., D.C. or Universal type motors. The  $2\frac{1}{2}$  K.W. size will light thirty-six 75-watt lamps (or equivalent) or will operate up to  $2\frac{1}{2}$  H.P., D.C. or Universal type motors.

To particularly meet the requirements, for which plants of this size are used, these models come standard with sheet metal housing as shown. The illustration below, right, shows the unit with housing removed.

### Engine

The engine is of the one-cylinder, four-cycle water cooled type, developing up to 5 H.P. at normal speed of plant, which is only 1100 R.P.M. on the  $1\frac{1}{2}$  K.W., and 1200 R.P.M. on the  $2\frac{1}{2}$  K.W. It is of the overhead valve design, extremely easy to service, and very accessible throughout.

A High Tension Magneto with impulse coupling, comprises the simple, positive ignition system.

The engine starts promptly under all climatic conditions and there is absolutely no danger of kick back.

The crankshaft is fully counterbalanced, making these plants run more smoothly than many of the four-cylinder units on the market.

### Desirable Features

These units were designed particularly for oil field, outdoor and construction lighting. They are easy to maintain, economical to operate, and can be depended upon to stand up under long and severe service.

Each unit is equipped with a power pulley which is often convenient to operate grinding wheels and other small machines. A large plate back of the power pulley is removable to provide easy access to the generator brushes and the commutator. A terminal block is located on the upper rear of the housing, so two separate line circuits can be conveniently attached. The fuel tank has sufficient capacity to run all night.

The main switch with fuse block, the voltage control rheostat and the pilot light are located on the rear panel inside of the housing, where they are easily reached.

### Generator

The generator, including brushes and commutator, is oversize throughout, and will stand overloads for hours without injury. Special commutating poles (interpoles) give absolutely sparkless commutation.

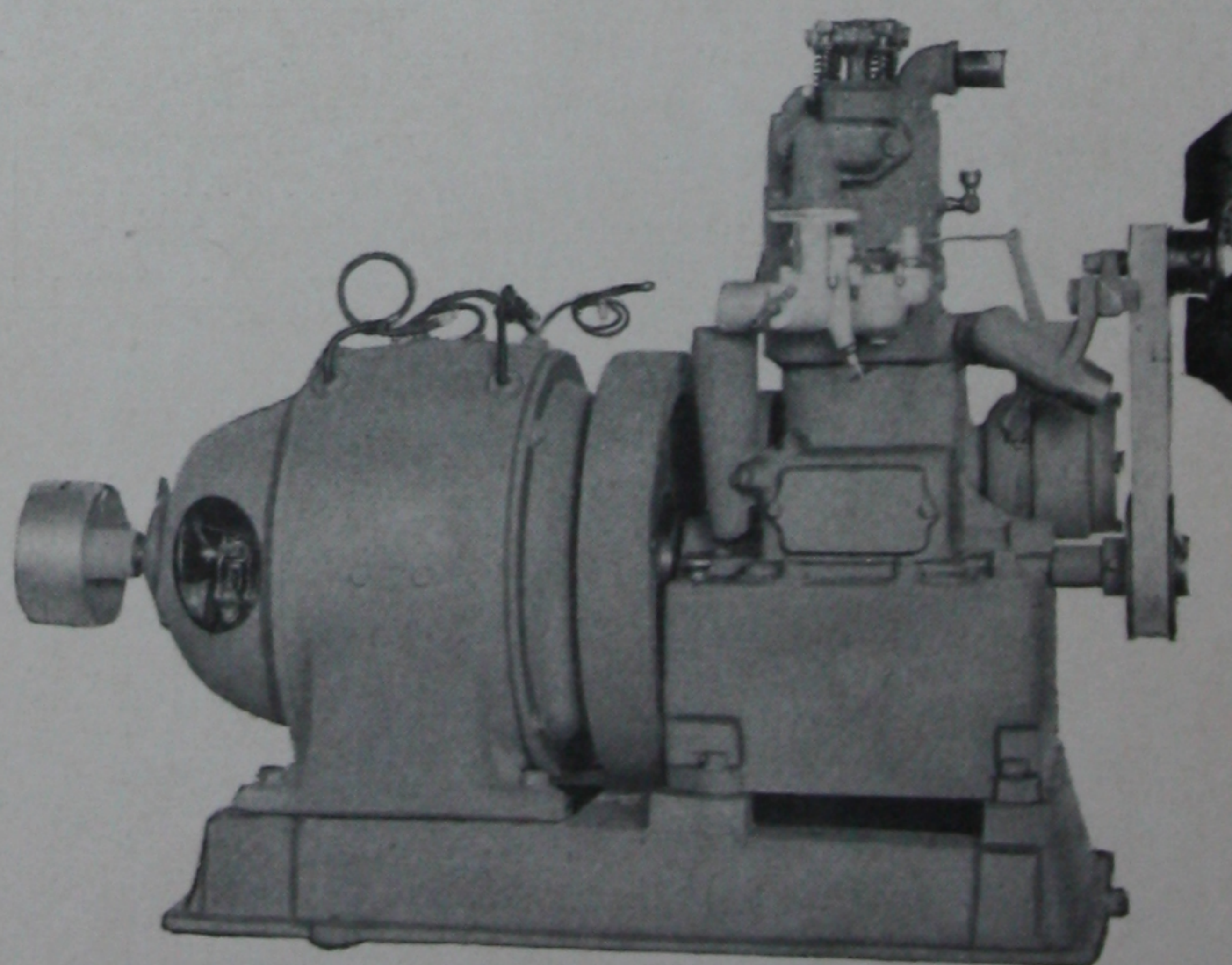
### Voltage Regulation

These plants have constant automatic voltage regulation under all load conditions, which prevents burning out of lamps or motors regardless of the load that is turned on or off.

### Economy

"Sullite" plants are very economical to operate, requiring only about  $1\frac{3}{4}$  pints of gasoline per kilowatt hour.

*No storage battery of any kind is required—every plant is completely self contained and ready for operation when received.*



Typical Model "SAK" or "SBK" with housing removed to show power take-off pulley and other details



## In the Oil Fields "Sullite" Plants Pay Off

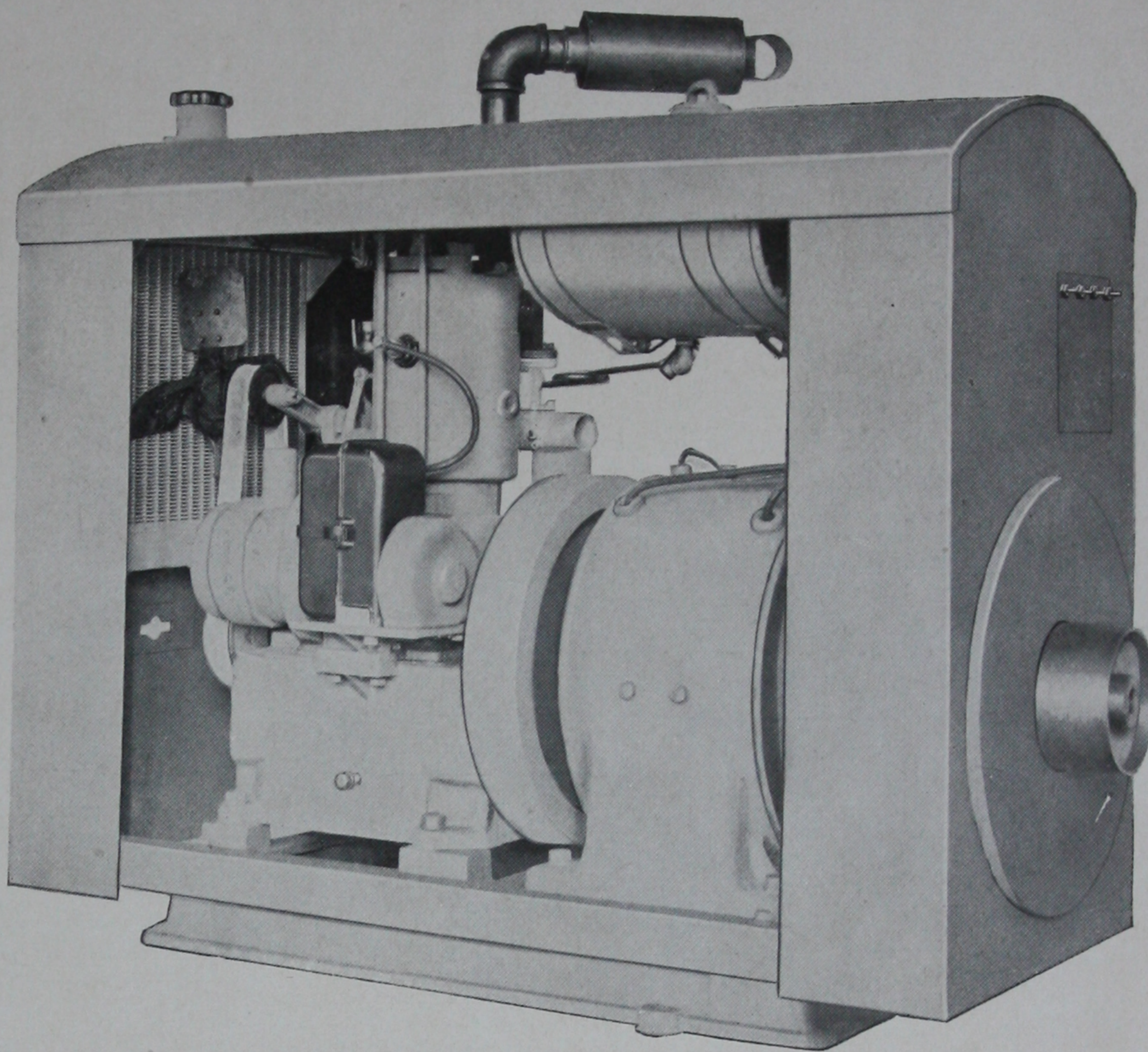
Hundreds of the smaller air cooled "Sullite" Plants are used in the oil fields, for all kinds of service. The harder the service, the more popular have "Sullite" electric plants become.

Model "SW," 350-watt, and Model "SY," 750-watt, are desirable for spudders, portable rigs and other mobile service; for lighting drill and tool sheds and for flood lighting.

Model "W," 400-watt, (See page 4) is used to charge automobile and truck batteries, and to keep the 6 and 12-volt starting batteries of the larger engines fully charged.

The Model "SR," 1500-watt, is a suitable plant for derrick and other lighting where up to twenty 75-watt lamps (or equivalent) is sufficient illumination.

"Sullite" Electric Plants "pay off" because of their economical and thoroughly dependable operation. "Sullite" Plants are always on the job.



Rear view of Model "SAK" or "SBK" showing power pulley and convenient double plug connector block for connecting lines

## Use "Stringalite" Safety Lighting Cable

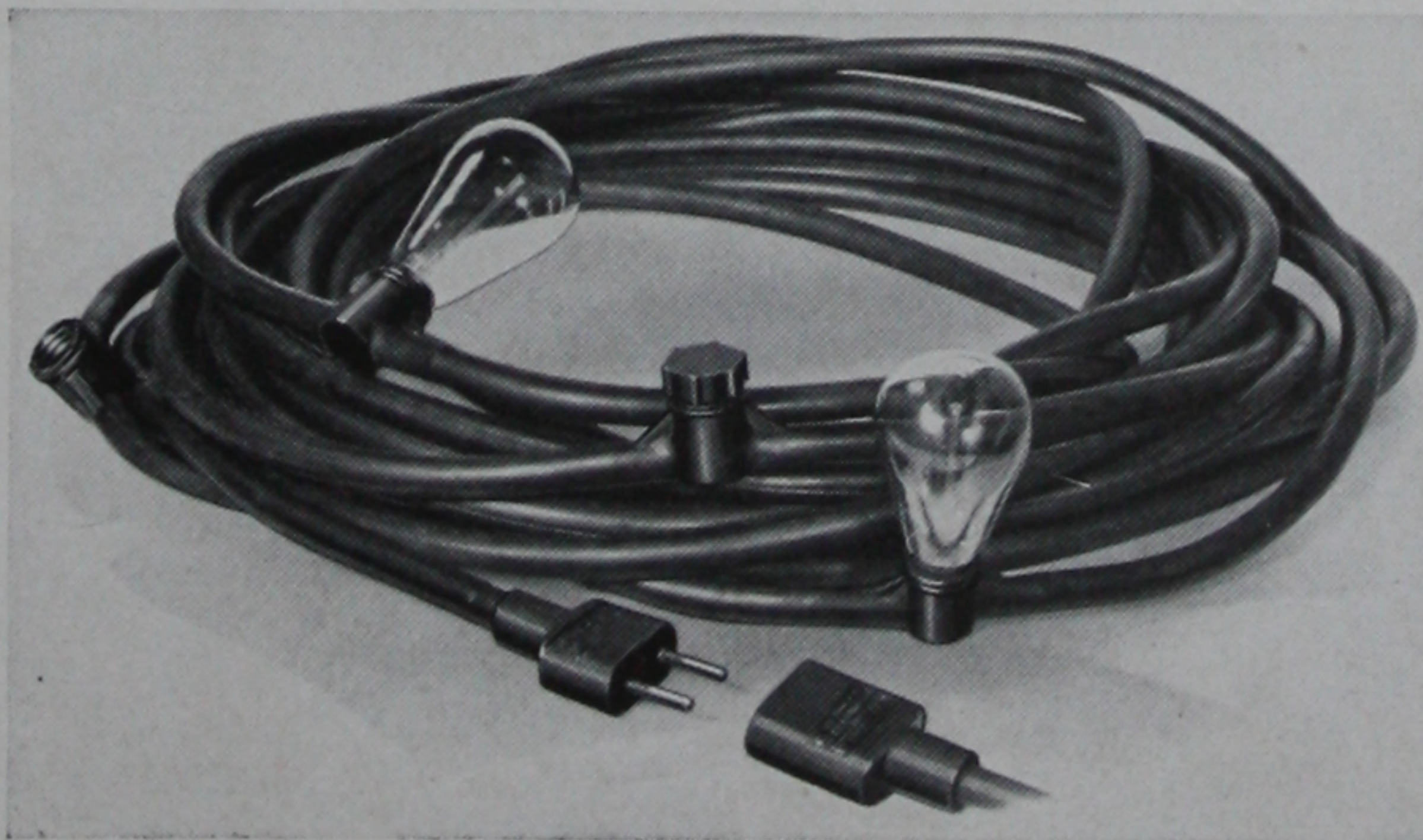
"Stringalite" Safety Lighting Cable was developed especially to withstand the severe demands of oil field and other outdoor lighting service, and for use in mines.

"Stringalite" provides the safety and utility of a permanent installation, with the wiring simplicity and economy of a temporary job, and is therefore particularly suited for use with "Sullite" Electric Plants.

It is unusually durable, being made of the finest moulded rubber covered cable. Moulded rubber covered fittings, vulcanized to the cable make "Stringalite" safe and practically indestructible.

Among the valuable features of "Stringalite" are: installation, extension or removal may be done quickly and easily by workmen on the job; it may be hung over any projecting object such as a nail, timber or bracket—no insulators or special supports are required; there are no taped joints to give trouble; one hundred per cent salvage value is secured upon removal or change of location; ample light is provided where it is needed; the length may be extended to any required distance

from the current source; sockets and connections are practically unbreakable; standard lamp guards may be used; and a heavy coat of tough moulded rubber covers the cable, connectors and sockets in one piece, thoroughly insulating each part against electrical leakage, providing perfect protection against wear and weather.



"Stringalite" Cable with sockets and end connectors

"Stringalite" consists of a tough moulded rubber covered, stranded No. 10 two-conductor light cable, into which moulded rubber covered, porcelain lamp sockets are vulcanized at 33 $\frac{1}{3}$ -foot intervals. Cable and connectors are tested at 1500 volts. Moulded

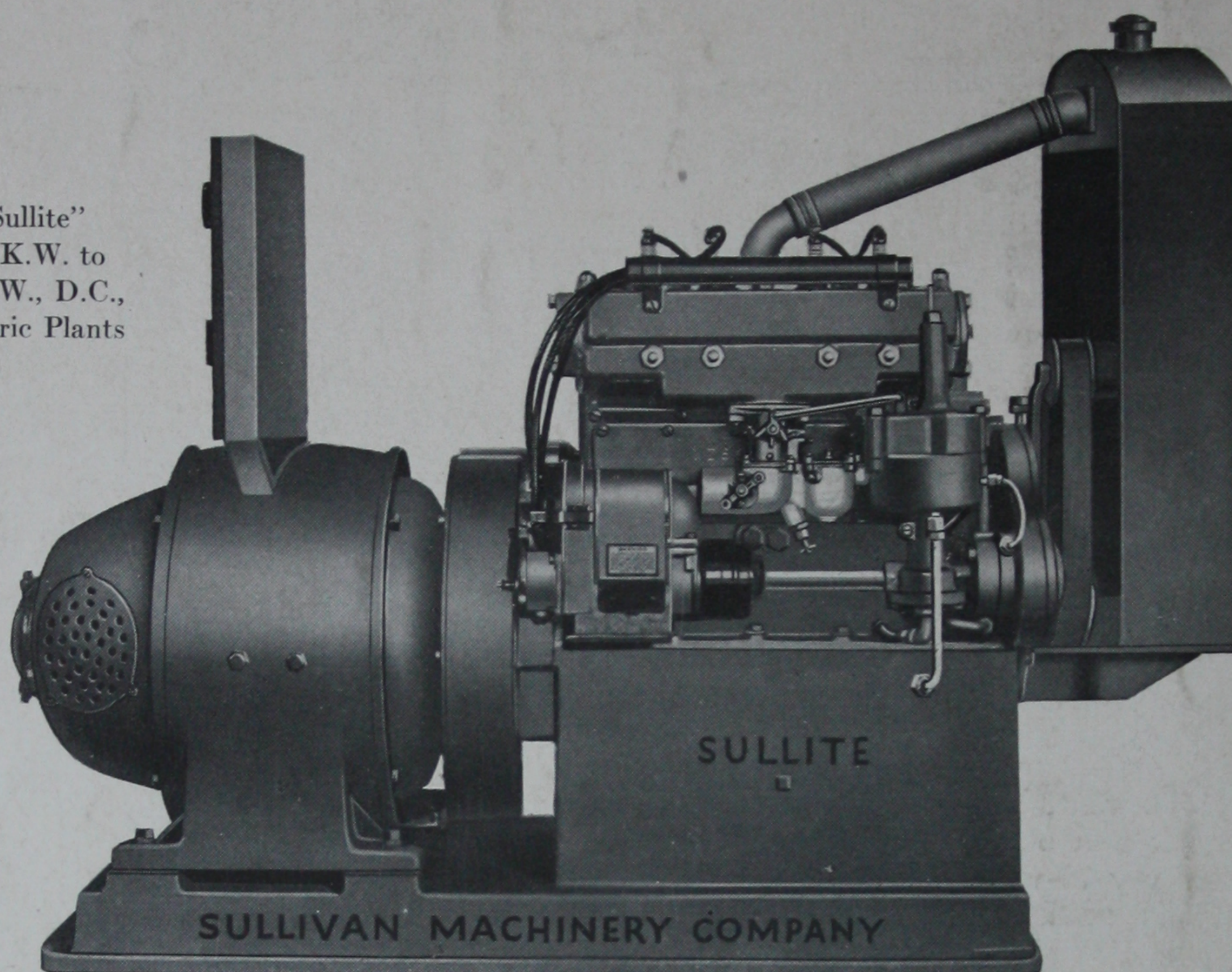
rubber blank screw plugs are used to seal light sockets that are not in use, the whole providing a moisture-proof corrosion-proof and absolutely safe lighting system.

Sullivan "Stringalite" is carried in stock in lengths of 100 and 200 feet, with three lamp sockets to every hundred-foot length and plug-in end connectors, attached. Other lengths may be had on order.

"Stringalite" bulletin No. 100-A and prices will be gladly sent on request.



"Sullite"  
1½ K.W. to  
15 K.W., D.C.,  
Electric Plants



## "Sullite" Four-Cylinder Electric Plants

The illustration above shows the general construction of "Sullite" Four-cylinder Electric Plants, which are available in the following sizes: 1½ K.W.; 2½ K.W.; 4 K.W.; 5 K.W.; 7½ K.W.; 10 K.W. and 15 K.W.—for generating direct current.

These four-cylinder plants are completely self-contained, and can be furnished in either 110 volts or 220 volts. They require no storage battery of any kind.

## Alternating Current Plants

"Sullite" Electric Plants are also available in alternating current, 110 volts, in standard sizes from 1½ K.V.A. to 10 K.V.A.

Detailed information on any of the above machines will be sent upon request. Specify the current characteristics desired, whether A. C. or D. C.

# SULLIVAN MACHINERY COMPANY

400 NORTH MICHIGAN AVENUE

CHICAGO, ILLINOIS, U. S. A.

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